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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,639	05/27/2005	Wilhelmus Franciscus Verhaegh	NL021205	2485
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/536,639

Applicant(s)

VERHAEGH ET AL.

Examiner

Nnenna N. Ekpo

Art Unit

2623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/27/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date 05/27/2005

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of records in the file.

Information Disclosure Statement

2. The reference listed in the Information Disclosure Statement filed on May 27, 2005 has been considered by the examiner (see attached PTO-1449 form).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 7 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 7 is directed to a signal that is neither a process ("actions"), machine, manufacture nor composition of matter (i.e., a tangible "thing") and therefore does not fall within one of the four statutory categories of §101.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-3 and 5-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Seifert (U.S. Publication No. 2001/0021999) in view of Krause et al. (U.S. Patent No. 5,612,742) and Kermod et al. (U.S. Patent No. 6,018,359).

Regarding **claim 1**, Seifert discloses a broadcast system including a plurality of broadcast receivers and a broadcasting device for broadcasting titles to the broadcast receivers using a near-video-on-demand broadcasting protocol (see paragraphs 0037 and 0039);

the broadcasting device being operative to broadcast data blocks of a title via a parallel equal capacity channels of the broadcast system, where each broadcast channel is associated with a respective sequential channel number (see paragraph 0038, lines 1-5 and paragraph 0103); the number of sub-channels in a channel being monotonous non-decreasing with the channel number (see paragraph 0083 and figs 4-6); the sub-channels in a channel being associated with a respective sequential sub-channel number (see tables on paragraphs 0109 and 0112); the title being divided in a plurality of consecutive data block sequences (see table on paragraph 0109, paragraph 0022, 0078 and 0112); each block sequence being assigned to one respective sub-channel according to the channel number and sub-channel number (see tables on paragraphs 0109 and 0112).

However, Seifert fails to specifically disclose a plurality of the broadcast channels including a plurality of time-sequentially interleaved sub-channels; the broadcasting device being operative to repeatedly broadcast each block sequence in the assigned sub-channel;

the broadcast receiver having a capacity to simultaneously receive all sub-channels of a plurality r ($1 < r \leq c$) of the channels; the broadcast receiver being operative to receive a title by starting reception of all sub-channels of the sequentially lowest r channels and each time in response to having received all blocks of the block sequence of a sub-channel of channel i terminate reception of the sub-channel in channel i and start reception of at least one sub-channel of channel $r+i$ until all block sequences have been received.

Krause et al. discloses a plurality of the broadcast channels including a plurality of time-sequentially interleaved sub-channels (see col. 3, lines 62-col. 4, line 5); the broadcasting device being operative to repeatedly broadcast each block sequence in the assigned sub-channel (see col. 4, lines 6-22 and col. 11, lines 64-col. 12, line 11);

the broadcast receiver having a capacity to simultaneously receive all sub-channels of a plurality r ($1 < r \leq c$) of the channels (see col. 2, lines 66-col. 3, line 15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Seifert's invention with the above mentioned limitation as taught by Krause et al. for the advantage of receiving a later or earlier segment of the program.

However, Seifert and Krause et al. fails to specifically disclose the broadcast receiver being operative to receive a title by starting reception of all sub-channels of the sequentially lowest r channels and each time in response to having received all blocks of the block sequence of a sub-channel of channel i terminate reception of the sub-

channel in channel i and start reception of at least one sub-channel of channel $r+i$ until all block sequences have been received.

Kermode et al. discloses the broadcast receiver being operative to receive a title by starting reception of all sub-channels of the sequentially lowest r channels and each time in response to having received all blocks of the block sequence of a sub-channel of channel i terminate reception of the sub-channel in channel i and start reception of at least one sub-channel of channel $r+i$ until all block sequences have been received (see col. 4, lines 29-45).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Seifert and Krause et al.'s invention with the above mentioned limitation as taught by Kermode et al. for the advantage of sequentially presenting new segments that are being downloaded.

Regarding **claim 2**, Seifert, Krause et al. and Kermode et al. discloses everything claimed applied above (see *claim 1*). Krause et al. discloses a broadcast system, wherein the broadcasting device is operative to broadcast the data blocks assigned to the parallel channels synchronously using equal-duration time slots (see col. 14, lines 28-31); each sub-channel of channel i being associated with at least one sub-channel of channel $r+i$ whose blocks are only being broadcast during time-slots used for broadcasting the associated sub-channel of channel i (see col. 4, lines 25-50).

Kermode et al. discloses the broadcast receiver being operative, in response to having received all blocks of the block sequence of a sub-channel of channel i , to start reception of an associated sub-channel of channel $r+i$ ($i \geq 1$) (see col. 4, lines 29-45).

Regarding **claim 3**, Seifert, Krause et al. and Kermode et al. discloses everything claimed applied above (see *claim 1*). Seifert discloses a broadcast system, wherein channel $i+r$ has a multiple $M_{\text{sub},i}$ of sub-channels of the number of sub-channels in channel I (see paragraph 0083, lines 1-3);

Krause et al. discloses each sub-channel of channel i being associated with $M_{\text{sub},i}$ sub-channels of channel $r+i$ whose blocks are only being broadcast during time-slots used for broadcasting the associated sub-channel of channel I (see col. 4, lines 23-50);

Kermode discloses the broadcast receiver being operative in response to having received all blocks of the block sequence of a sub-channel of channel i start reception of the M_i associated sub-channels of channel $r+i$ ($i \geq 1$) (see col. 4, lines 29-45).

Regarding **claim 5**, Seifert, Krause et al. and Kermode et al. discloses everything claimed applied above (see *claim 1*).

Seifert discloses a broadcast receiver for use in a broadcast system wherein a broadcasting device uses a near-video-on-demand broadcasting protocol (see paragraphs 0037 and 0039);

a broadcasting device being operative to broadcast data blocks of a title via c parallel equal capacity channels of the broadcast system, where each broadcast channel is associated with a respective sequential channel number (see paragraph 0038, lines 1-5 and paragraph 0103); the number of sub-channels in a channel being monotonous non-decreasing with the channel number (see paragraph 0083 and figs 4-6); the sub-channels in a channel being associated with a respective sequential sub-channel number (see tables on paragraphs 0109 and 0112); the title being divided in a plurality of consecutive data block sequences (see table on paragraph 0109, paragraph 0022, 0078 and 0112); each block sequence being assigned to one respective sub-channel according to the channel number and sub-channel number (see tables on paragraphs 0109 and 0112).

Krause et al. discloses a plurality of the broadcast channels including a plurality of time-sequentially interleaved sub-channels (see col. 3, lines 62-col. 4, line 5); the broadcasting device being operative to repeatedly broadcast each block sequence in the assigned sub-channel (see col. 4, lines 6-22 and col. 11, lines 64-col. 12, line 11);

the broadcast receiver having a capacity to simultaneously receive all sub-channels of a plurality r ($1 < r \leq c$) of the channels (see col. 2, lines 66-col. 3, line 15).

Kermode et al. discloses the broadcast receiver being operative to receive a title by starting reception of all sub-channels of the sequentially lowest r channels and each time in response to having received all blocks of the block sequence of a sub-channel of channel i terminate reception of the sub-channel in channel i and start reception of at

least one sub-channel of channel $r+i$ until all block sequences have been received (see col. 4, lines 29-45).

Regarding **claim 6**, Seifert, Krause et al. and Kermode et al. discloses everything claimed applied above (see *claim 1*).

Seifert discloses a method of receiving broadcast data in a broadcast receiver for use in a broadcast system wherein a broadcasting device uses a near-video-on-demand broadcasting protocol (see paragraphs 0037 and 0039);

a broadcasting device being operative to broadcast data blocks of a title via c parallel equal capacity channels of the broadcast system, where each broadcast channel is associated with a respective sequential channel number (see paragraph 0038, lines 1-5 and paragraph 0103); the number of sub-channels in a channel being monotonous non-decreasing with the channel number (see paragraph 0083 and figs 4-6); the sub-channels in a channel being associated with a respective sequential sub-channel number (see tables on paragraphs 0109 and 0112); the title being divided in a plurality of consecutive data block sequences (see table on paragraph 0109, paragraph 0022, 0078 and 0112); each block sequence being assigned to one respective sub-channel according to the channel number and sub-channel number (see tables on paragraphs 0109 and 0112).

Krause et al. discloses a plurality of the broadcast channels including a plurality of time-sequentially interleaved sub-channels (see col. 3, lines 62-col. 4, line 5); the

broadcasting device being operative to repeatedly broadcast each block sequence in the assigned sub-channel (see col. 4, lines 6-22 and col. 11, lines 64-col. 12, line 11);

the broadcast receiver having a capacity to simultaneously receive all sub-channels of a plurality r ($1 < r \leq c$) of the channels (see col. 2, lines 66-col. 3, line 15).

Kermode et al. discloses the broadcast receiver being operative to receive a title by starting reception of all sub-channels of the sequentially lowest r channels and each time in response to having received all blocks of the block sequence of a sub-channel of channel i terminate reception of the sub-channel in channel i and start reception of at least one sub-channel of channel $r+i$ until all block sequences have been received (see col. 4, lines 29-45).

Claim 7 is directed toward embody the method of *claim 6* in "computer program product". It would have been obvious to embody the procedures of Seifert, Krause et al. and Kermode et al. discussed with respect to claim 6 in a "computer program product" in order that the instructions could be automatically performed by a processor.

6. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Seifert (U.S. Publication No. 2001/0021999), Krause et al. (U.S. Patent No. 5,612,742) and Kermode et al. (U.S. Patent No. 6,018,359) as applied to claim 1 above, and further in view of "A Fixed-Delay Broadcasting Protocol for Video-on-Demand" Proc. 10th International Conference on Computer Communications and Networks, Oct. 15-17, 2001 by Jehan-Francois Paris.

Regarding **claim 4**, Seifert, Krause et al. and Kermod et al. discloses everything claimed applied above (*see claim 1*). However, Seifert, Krause et al. and Kermod et al. fail to specifically disclose the near-video-on-demand protocol is a fixed-delay pagoda broadcasting protocol.

Jehan-Francois Paris discloses the near-video-on-demand protocol is a fixed-delay pagoda broadcasting protocol (see entire article, especially page 1, lines 38-page 2, line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Seifert, Krause et al. and Kermod et al.'s invention with the above mentioned limitation as taught by Jehan-Francois Paris for the advantage much simpler segment-to-channel mapping.

Citation of Pertinent Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Birk et al. (U.S. Patent No. 6,502,139) discloses program partitioned into segments, each segments is transmitted repeatedly.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nnenna N. Ekpo whose telephone number is 571-270-1663. The examiner can normally be reached on Monday - Friday 7:30 AM-5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NNE/nne
March 11, 2008.

/Brian T. Pendleton/
Supervisory Patent Examiner, Art Unit 2623